| Work Orde | |)2 | | *980 | 302* | | | | | | | Page 1 |
|--|---------|--|---------------------------------|--|-------------|--------------|--------------|---------------|-------------|---------------|------------------|----------------|
| Revision ID: Item Name: Start Date: | | Start Qty: 4.00 | *4* | Accept | *N900 | | 100 | * | Setup | Start Stop | I W | S1* S2* |
| Required Date: Reference: | 3/2//13 | Req'd Qty: 4.00 | *4* | | Customer: | | | | | | | |
| Approvals: | | _MC5 | _ | | | ate: ate: | | I | | Start Stop | 1/1 | R1* R2* |
| Sequence ID/ Work Center II | | peration Description | | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reje Qty | | Reject Number | Insp. Stamp |
| Draw Nbr | Revisi | on Nbr | | | - | | | | | | | |
| D2125 | Rev C | | | | | | | | | | | |
| *.1 \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ | | LOW WATER JET Memo 1-Cut as pe Deburr if no | er Dwg D2125 Dwg Ro ecessary | 0.00 0.00 ev: <u>C</u> Prog Rev: <u><</u> | _ 2- | | | 6 | , | 0 | | Jm13-4-8 |
| 110 *110* QC Quality Control | (| QC2- Inspect parts off n Memo | | 0.00 | | | | 6 | | . | | Jm13-4-8 |
| 120 *120* OC | (| QC8- Inspect parts - sec Memo | cond check | 0.00 | | | | 6 | | | | B13/04/65 |

Quality Control

| NCR: Ye | es / No | | | | WORK ORDER NON-O | CON | FORM | MANCE / UP | DATE | QA Closed: | Dat | te: |
|-------------------------------|-----------------|------------|---------------|--------|------------------------------|-----------|----------|-------------------------------|-------------------------------|---------------|--|---------------------------|
| Work Order | r: | | | | DISPOSITION | | | | AGAINST DE | | | |
| Part No | 0 | | - | | Rework Scrap Use-as-is | | 1 | Skid-tube Machining noforming | Crosstube Small Fab Finishing | 4 | Water Jet d. Eng. Coor. re/Packaging | Engineering Quality Other |
| NCR No | 0 | | ···- | | Work Order Update |] | | Large Fab | Composite | , necyston | Supplier | |
| Root | | | | Descri | ption of work order update | Ir | nitial | Act | tion | Sign & | | |
| Cause | Date | Step | Qty | (| or Non-conformance | Chi | ef Eng | Desci | ription | Date | Verification | n QC Inspector |
| Doc/Data | | | | | | | | | | | | |
| Equip/Tooling | | | i i | | | 1. | | | | | | |
| Operator | | |] | | | | | | | | | |
| Material | | | | | | 1 | | | | | | |
| Setup | | | | | | ŀ | | | | | | |
| Other | | <u> </u> | | | | | | | | | • | |
| Process | | | | | | | | | | | | |
| Supplier | _ | i | | | | ļ | | | | | | |
| Training | | |] | | | 1 | | | | ĺ | | |
| Unapproved | | | | | | | | | | | | |
| | | | | | F | AUL1 | CATE | GORY | | | | |
| Landing | g Gear | | | _ | General | | | | | • | - | |
| ļ_ | Bending | | | | Bend | LI' | Grain | | | Ovalized | | Pressure/Forced |
| | Centre No | ot Concer | ntric to (| o/s | BOM/Route | \square | Hardwa | re | | Over/Under | tolerance | Temperature/Cure |
| | Cracks | | | | Broken/Damaged | | Inspecti | on Incomplete | | Part Incorred | ct | Weld |
| | Crushed/Crimped | | | | Burrs | | Instruct | ions Incomplete/l | Unclear | Part Lost/Mi | ssing | Wrong Stock Pulled |
| | Cuffs | | | | Contamination | <u>'</u> | Mainte | enance | | Part Moved | | |
| | Heat Trea | it | | | Countersink | <u> </u> | Mislabe | led | | Positioned V | Vrong | |
| | Tube | | Cut Too Short | | Misread | i | | Power Loss/ | Surge | Other | | |
| Ripples in Bend ' Drill Holes | | | | | Drill Holes | | Offset | | | | | |
| . 1 | Torque W | aves in E | Extrusion | ı [| Drawing | | Out of 0 | Calibration | | | | • |
| Γ | Turning S | equence | | | Finish | | Out of S | Sequence | | | | |
| ľ | Wave/Tw | ist in Tub | эе | | Folio | \Box | Outside | Dimensions | | | | <u></u> |

DQA:

Date:

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

| Work Orde March-28-13 10 | | | | *980 | 3N2* | | | | | | | Page 2 |
|--|---------------------|---|-----------------|--|--------------------------|-------------|--------------|--------------|--------------|---------------|------------------|-------------|
| Revision ID: | D2125 350/355 FI | oor Window | | Accept | *N900 | <u>04</u> 0 | 100 |)* | Setup | Start Stop | | S1* S2* |
| | 3/27/13 3/27/13 | Start Qty: 4.00 Req'd Qty: 4.00 | *4* *4* | | Cust Item I Customer: | ID: | | | | | 14. | |
| Approvals: | | Plan: | | | | ate: | | | Run | Start Stop | "171 | R1* R2* |
| Sequence ID/ Work Center ID 130 *130* Thermoform Thermoforming Machine | | Operation Description THERMOFORMING M. Memo 1-Thermoforrev:2- | | Set Up/ Run Hours 0.00 0.00 and dwg D2125Dwg rev: affix label as per dwg D21 | Tool ID Folio | Tool# | Plan Code | Accep Qty | t Rej Qty | y] | Reject Number | Insp. Stamp |
| 140 *140* QC Quality Control | | QC2- Inspect parts off m Memo | achine FAI/FAIB | 0.00 | | | (| Se |)_ | | B | 13/04/15 |
| 150 *150* QC | | QC8- Inspect parts - seco | ond check | 0.00 | | | | y6, | | | | Sh |

Quality Control

| | | | | | | | | | DQA: | Date: | | | | |
|---------------|---------|------|-----|-------------|----------------------------------|---------|----------------------|---------------------|------------|-------------------------|---------------------------------|----|--|--|
| NCR: Ye | es / No | | | | WORK ORDER NON-C | ONFO | RMANCE / UI | PDATE | QA Closed: | Date: | | | | |
| Work Order | ·: | | | | DISPOSITION | | | AGAINST DE | PARTMENT/ | PROCESS | | | | |
| Part No | | | | | Rework Scrap | The | Skid-tube Machining | Crosstube Small Fab | 4 | Water Jet d. Eng. Coor. | Engineering Quality Other | | | |
| NCR No | o | | | | Use-as-is Work Order Update | Ine | rmoforming Large Fab | | | | | | | |
| Root | | | | Descri | ption of work order update | Initial | Α | ction | Sign & | | | | | |
| Cause | Date | Step | Qty | | or Non-conformance | Chief E | ng Des | cription | Date | Verification | QC Inspecto | or | | |
| Doc/Data | | | | | | | | | | | | | | |
| Equip/Tooling | | | | | İ | | | | | | | | | |
| Operator | | | | | | | | | | | | | | |
| Material | | | | | | | | | | | | | | |
| Setup | | | | | | | | | | | | | | |
| Other | | | | | : | | | | | | • | | | |

| Landing G | Gear e | General | | _ | _ | | _ |
|-----------|------------------------------|----------------|----------|---------------------------------|----------------------|---|--------------------|
| | Bending | Bend | | Grain | Ovalized | | Pressure/Forced |
| | Centre Not Concentric to O/S | BOM/Route | Γ | Hardware | Over/Under tolerance | | Temperature/Cure |
| | Cracks | Broken/Damaged | | Inspection Incomplete | Part incorrect | | Weld |
| | Crushed/Crimped | Burrs | Г | Instructions Incomplete/Unclear | Part Lost/Missing | | Wrong Stock Pulled |
| | Cuffs | Contamination | | Maintenance | Part Moved | | _ |
| | Heat Treat | Countersink | Г | Mislabeled | Positioned Wrong | * | _ |
| | Inspection Strip in Tube | Cut Too Short | | Misread | Power Loss/Surge | | Other |
| | Ripples in Bend | Drill Holes | | Offset | | | |
| | Torque Waves in Extrusion | Drawing | | Out of Calibration | | | |
| | Turning Sequence | Finish | | Out of Sequence | | | |
| | Wave/Twist in Tube | Folio | | Outside Dimensions | | | |

FAULT CATEGORY

Process Supplier Training Unapproved

| Work Ord | | 3902 | | *C | 890 | 2 * | | | | | | | Page 3 |
|---|-----------------------|---|--|--|--------|-------------|------------|--------------|--------------|------------|---------------|------------------|---------------------------|
| Item ID: Revision ID: Item Name: | D2125 350/355 Floo | or Window | | Accept | * | 1900 | 040 | 100 |)* | Setup | Start Stop | *N. | S1* S2* |
| Start Date: Required Date Reference: | 3/27/13 e: 3/27/13 | Start Qty: 4.00 Req'd Qty: 4.00 | *4* *4* | | | Cust Item I | D: | | | | | | |
| Approvals: | Process Pl | an: | Date: | _ Tooling: _ SPC (Y/N |): | | nte: | | | Run | Start Stop | *N *N | R1* R2* |
| Sequence ID/ Work Center 160 *160* Thermoform Thermoforming M | | Operation Description HAND FINISHING THE Memo Water sand | ERMOFORMING and buff to remove scracte | Set Up Run He 0.00 0.00 ches as required | | Tool ID | Tool# | Plan Code | Accep Qty | t Re Qt | | Reject Number | Insp. Stamp 3/04/16 |
| 170 *170* QC Quality Control | | QC5- Inspect part comp | eteness to step on W/O | 0.00 | 154 le | | , | | 6 | | | | - |

180

Packaging

180 Packaging

Memo

0.00

0.00

Packaging

Wrap in cellophaneIdentify and StockLocation:

Sport Sport

BB 1364/16.

| NCR: | Yes | / | No | |
|------|-----|---|----|--|
| | | | | |

| | | | | | | | | | | | | DQA: | Da | te: | |
|--|---|------------|-----------|---|-------------|---|---|----------|-------------------------------|--|---------------------|--|--------------------------|-----|--|
| NCR: Y | 'es | / No | | | | | WORK ORDER NON-C | 100 | VFORI | MANCE / UPE | DATE | QA Closed | Da | to. | |
| Monte Onde | ٠ | | | | | T | DISPOSITION | | | | AGAINST D | EPARTMENT | | | · |
| Work Orde Part N | - | | . <u></u> | · . · . · . · . · · · · · · · · · · · · | | | Rework Scrap | | | Skid-tube Machining | Crosstube Small Fab | Pro | Water Jet | | Engineering Quality |
| NCR N | | | | | | | Use-as-is Work Order Update | | | noforming Large Fab | Finishing Composite | Rec/Sto | re/Packaging Supplier | | Other |
| Root Cause | | Date | Step | Qty | Descr | • | tion of work order update Non-conformance | • | nitial ief Eng | Act Descr | ion iption | Sign & Date | Verification | า | QC Inspector |
| oc/Data quip/Tooling perator faterial etup ther rocess upplier raining napproved | | | | | | | | | | | | | | | |
| _ | | | | | | | F/ | AUL | T CATE | GORY | | | | | |
| Landi | ng (| Gear | | | | | General | | | | | | | | • |
| | Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube | | | | | | Bend BOM/Route Broken/Damaged Burrs Contamination Countersink | | Instruct Mainte Mislabe | on Incomplete ions Incomplete/U nance led | Inclear | Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned N | ct issing Vrong | | Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled |
| · | | i | | Tube | - | _ | Cut Too Short | \vdash | Misread | I | L | Power Loss, | 'Surge | | Other |
| | | Ripples in | | | _ - | | Drill Holes | - | Offset | Saliharati au | | | | | |
| | | Torque W | | xtrusio | n - | _ | Drawing Finish | - | l | Calibration | | | | | |
| | | Turning Se | equence | | | - | AIRIISI | L | log cour | equence | | | | | |

Outside Dimensions

Wave/Twist in Tube

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

| Work Ord | | | | *989 | 302* | | | | | | | Page 4 |
|---|-----------------------|---|----------------------|------------------------------|--------------------------|------------|--------------|--------------|-------|---------------|------------------|------------------|
| Item ID: Revision ID: Item Name: | D2125 | Floor Window | | Accept | *N900 | 040 | 100 |)* | Setup | Start Stop | 1.71 | S1* S2* |
| Start Date: Required Date Reference: | 3/27/13 :: 3/27/13 | | *4* *4* | | Cust Item I Customer: | D: | | | _ | 64 | | |
| Approvals: | Proces QC: _ | s Plan: | Date: | Tooling: SPC (Y/N): | | nte: | | | Run | Start Stop | 1/1 | R1* R2* |
| Sequence ID/ Work Center 190 *190* QC Quality Control | ĮD. | Operation Description QC21- Final Inspection - Memo | - Work Order Release | Set Up/ Run Hours 0.00 | Tool ID | Tool# | Plan Code | Accep Qty | t Re | | Reject Number | Insp. Stamp (G) |

| | | * | | | | | | | | | DQA: | Dat | te: |
|---|--------------------------|---|---------|----------|----------|---|----------|--------------------|--|---|---|--|--|
| NCR: | Yes | / No | | | | WORK ORDER NON- | O | VFORM | MANCE / UPI | DATE | | | |
| <u></u> | | | | | | • | | | • | | QA Closed: | Dat | te: |
| Work Orde | or. | | | | | DISPOSITION | | | | AGAINST DE | PARTMENT | /PROCESS | |
| Part NCR 1 | - ر No. | ·*···· | | | | Rework Scrap Use-as-is Work Order Update | | Thern | Skid-tube Machining noforming Large Fab | Crosstube Small Fab Finishing Composite | 4 | Water Jet d. Eng. Coor. re/Packaging Supplier | Engineering Quality Other |
| Root | | | | | Descri | ption of work order update | .1 | nitial | Act | ion | Sign & | | |
| Cause | | Date | Step | Qty | (| or Non-conformance | Ch | ief Eng | Descr | ription | Date | Verification | QC Inspector |
| Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved | | | | | | | | | | | | | |
| : | | | | | | | AUL | T CATE | GORY | · · · · · · · · · · · · · · · · · · · | | | |
| Landi | | Bending Centre No Cracks Crushed/G | Crimped | ntric to | o/s | General Bend BOM/Route Broken/Damaged Burrs Contamination | | Instruct Mainte | on Incomplete ions Incomplete/Unance | Jnclear | Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved | ct ssing | Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled |
| | Heat Treat | | | | | Countersink | L | Mislabe | | <u> </u> | Positioned V | | |
| | Inspection Strip in Tube | | | | | Cut Too Short | \vdash | Misread | I | <u> </u> | Power Loss/ | Surge [| Other |
| | | Ripples in | Bend | | <u>L</u> | Drill Holes | | Offset | | | | | |

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

Page 1

Work Order ID:

98902

Parent Item:

D2125

Parent Item Name:

350/355 Floor Window

Start Date: 3/27/13

Required Date: 3/27/13

Start Qty: 4.00

Required Qty: 4.00

Comments:

IPP: D05.10.14Added bold comments on step 5/6 & cellophane on step 7KJ/EC

IPP E 07.05.29 thermoformed in-house

EC verified by:DD

| | IPP F 07.09.28 | rev C dwg | | EC verific | ed by:DD | | | | | | | | |
|--|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|-----------------------|---------------|----------------|---------|
| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
| MACRLICS.125 1/8" Polycast II Sheet | da da - 4 : | Purchased | No | | | 120 | sf | 674.7445 | 1.664 | 7.00631 56 | | n A - | JM13-4- |
| | | | | Location | | Loc Qty | <u>Lo</u> | c Code | | | | | |
| | | | | MAT019 | | 331 | | | | | | | |
| | | | | 1237 | '04 | 33 | | | *** | | | | |
| | | | | 1239 | 149 | 71 | | | | - | | | |
| | | | | 1245 | 59 | 227 | | | 124 | <u>559</u> | | | |
| | | | | ther | | 343.7445 | | | | | • | | |
| | | | | 1238 | 95 | 343.7445 | | | <u> </u> | | | | |

| | | | | | | | | | | | DQA: | Date: | |
|---------------|------|-----------|------------|----------|-------------|----------------------------|-----|----------|------------------|------------|--------------|---------------|--------------------|
| NCR: | Yes | / No | | | | WORK ORDER NON- | COI | NFORM | MANCE / UP | DATE | | , | |
| | | | | | | | | • | | | QA Closed: | Date: | |
| Work Ord | oř. | , | | | | DISPOSITION | | | | AGAINST DE | PARTMENT | /PROCESS | |
| Work Ord | E1. | | | | | Rework | ٦ . | | Skid-tube | Crosstube | 7 | Water Jet | Engineering |
| Part I | No. | | | | | Scrap | - | 1 | Machining | Small Fab | Pro | d. Eng. Coor. | Quality |
| | | | | | | Use-as-is | 1 | | noforming | Finishing | -1 | re/Packaging | Other |
| NCR I | No. | | | | | Work Order Update | 1 | | Large Fab | Composite |] | Supplier | |
| Root | | | · · | | Descri | ption of work order update | Τ | Initial | Ac | tion | Sign & | | |
| Cause | | Date | Step | Qty | | or Non-conformance | | nief Eng | | cription | Date | Verification | QC Inspector |
| Doc/Data | | | | | | | | | | | | | |
| Equip/Tooling | | | | | | | 1 | | • | | | | |
| Operator | | | 1 | | | | | · | | | | | |
| Material | | 1 | | | | | | | | | İ | | |
| Setup | | | | | | i | | | | | | | |
| Other | | | | | | | | | : | | | | |
| Process | | | | 1. | | | İ | | | | | | |
| Supplier | | | | | | | | | | | | | |
| Training | | | | | | | | | - | | | | |
| Unapproved | | | | ŀ | | | | | | | | | |
| | | | | | | F | AUI | LT CATE | GORY | | | | |
| Landi | ng (| Gear | | | ٠ | General | | - | | | - | | , |
| | | Bending | | | | Bend | L | Grain | | | Ovalized | | Pressure/Forced |
| | | Centre N | ot Conce | ntric to | o/s | BOM/Route | | Hardwa | re | | Over/Under | tolerance | Temperature/Cure |
| | Ŀ | Cracks | | | | Broken/Damaged | L | Inspecti | on incomplete | | Part Incorre | ct | Weld · |
| | | Crushed/ | Crimped | | | Burrs | L | Instruct | ions Incomplete/ | 'Unclear | Part Lost/Mi | ssing | Wrong Stock Pulled |
| | | Cuffs | • | | | Contamination | L | Mainte | nance | | Part Moved | | |
| | | Heat Trea | at į | 4 | | Countersink | | Mislabe | led | | Positioned V | Vrong | - |
| | Γ | Inspectio | n Strip in | Tube | [| Cut Too Short | | Misread | 1 | | Power Loss/ | Surge | Other |

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

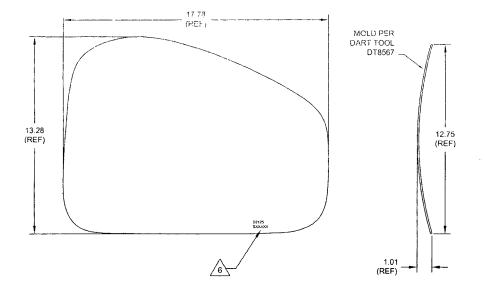
| DART AEROSPACE LTD | Work Order: | 98902 |
|------------------------------|--------------|-------------|
| Description: Floor Window | Part Number: | D2125 |
| Inspection Dwg: D2125 Rev: C | | Page 1 of 1 |

FIRST ARTICLE INSPECTION CHECKLIST

| TIKST AKTIOLE INST ESTION OF LECKLIST | | | | | | |
|---------------------------------------|-----------------------|------------------|--------|--------|-------------------------|----------|
| Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
| 17.78 | 4-0030 | (7.78" | _ | | T | Jkm06 |
| 13.28 | 11-0.030 | 13.25" | _ | | T | |
| 0.125 | 11-0.030 Oil-0.010 | 0,194, | _ | | · V | JAMOI |
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| Measured by: | Jm | Audited by: | Preliminary Approval: | |
|--------------|--------|-----------------|-----------------------|--|
| Date: | 13-4-8 | Date: 13/04/12. | Date: | |

| [| Rev | Date | Change | Revised by | Approved |
|---|-----|----------|-----------|------------|----------|
| | Α | 12.07.31 | New Issue | KJ 94 | Je11 |



PWW SUBJECT... Yan e. NO. 98902 MLJ 13-04-01

D2125 FLOOR WINDOW (FLAT TEMPLATE)

<u>D2125 FLOOR WINDOW:</u>
1) MATERIAL: POLYCAST II CLEAR ACRYLIC SHEET PER MIL-P-5425 OR PLEXIGLAS G CLEAR CAST ACRYLIC SHEET PER LP-391 TYPE 1 GRADE C, 0.125 THICK (REF. DART SPEC. M-ACRYLIC-S.125)

2) FINISH: NONE

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) REMOVE SHARP EDGES

6) IDENTIFICATION: ENGRAVE P/N "D2125" AND B/N ON LOWER EDGE USE 0.125" HIGH LETTERS TO MAXIMUM DEPTH OF 0.005"

7) WEIGHT: 0.98 +/- 0.22 LBS 8) FLAT ROUGH SiZE: 13.3 x 17.8 x 0.13

9) MOLD PER DART TOOL DT8567

| APPROVED \\ | | \mathcal{W} | TITLE | | SCALE | |
|-------------|------------------------------------|---------------|--------------|----------------|-------------|--------|
| MFG. APPR. | | D2125 | SHEET 1 OF 1 | | | |
| CHECKE | ED | 4 |) | DRAWING NO. | | REV. C |
| DRAWN | | D | 2/ | HAWKESBURY, ON | ITARIO, CAN | NADA |
| DESIGN | | J | 3 | DART AERO | SPACE | LTD |
| REV. | DESCRIPTION | | | BY | DATE | |
| - ' | NEW ISSUE | | | BW | 92.03.03 | |
| Α | ADDED PICTURE WITH OVERALL DIMS | | | KE | 99.03.09 | |
| В | CREATE DWG. UPDATE MTL PER NCR 029 | | | MB | 06.04.19 | |
| С | REDRAWN PER PAR 187 | | | DC | 07.07.18 | |

07.07.18

DATE

350/355 FLOOR WINDOW

NTS